



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,981	01/12/2007	Gian Pietro Beghelli	1340-049	9344
7590 James V. Costigan Hedman & Costigan 1185 Avenue of the Americas New York, NY 10036-2646			EXAMINER BERHANU, SAMUEL	
			ART UNIT 2838	PAPER NUMBER
			MAIL DATE 09/04/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/591,981

**Applicant(s)**

BEGHELLI, GIAN PIETRO

**Examiner**

SAMUEL BERHANU

**Art Unit**

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-19 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 06 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date 6/14/2007  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show descriptive labels for Figures 1-15. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue et. al. (US 5,744,933) (hereinafter Inoue) .

As to Claim 1, Inoue discloses in Figures 1-18, (6), which can also be used as an exhibitor of battery packs or packagings (5) in sales points, comprising at least a supporting element (slot), which includes a series of seats or housings (2, 18) for the insertion and/or linking of packs of batteries (battery pack of a mobile device) on sale, and means (60, see figure 4) for the charging, recharging and/or maintenance of the electric charge, electrically connected to said seats or housings (2, 18) of the recharging device.

As to Claim 2, Inoue discloses in Figures 1-18, characterized in that it also comprises at least one suitable housing (4), which can be used for the temporary resting of one of said battery packs (5), whose charge level is to be checked.

As to Claim 3, Inoue discloses in Figures 1-18, characterized in that each packaging (5) of batteries (6) contains a series of batteries (6), connected in series to

each other, of which at least two terminals (7, 8, 80) are accessible from the outside of the packaging (5) for connection to the recharging and/or maintenance means (20, 30) of the electric charge (see Column 9, lines 20-32).

As to Claim 4, Inoue discloses in Figures 1-18, characterized in that said recharging and maintenance means of the electric charge, by automatically recognizing, thanks to a control logic (50), the housing of at least one pack of batteries (5), immediately activates a charging cycle of said housing of the battery pack (5) inside at least one of said seats (2, 18).

As to Claim 5, Inoue discloses in Figures 1-18, characterized in that each of said housings or seats (2, 18) comprises signaling means, suitable for indicating the charge level and/or the arrival at the maximum charge level of the battery pack (5) inserted (see column 6, lines 33-36).

As to Claim 6, Inoue discloses in Figures 1-18, characterized in that said two terminals (7, 8, 80) are situated at different distances (D1, D2, D3), in order to be able to automatically select the necessary charge levels for the various types of batteries (6) to be charged (since batteries are disposed in different slots they are different position)

As to Claim 11, Inoue discloses in Figures 1-18, characterized in that said at least one supporting element (1, 17, 51) comprises automatic selection (see figure 14, element 29) and supply means of at least one of said battery packs (5), driven by a control logic (50), when a selection is effected by a user by means (10, 11, 12, 32, 33, 34) situated on the outer casing (35) of the recharging device.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malaspina (US 5,577,784) (hereinafter Malaspina) in view of Choi et. al. (US 6,396,242) (hereinafter Choi).

As to Claim 1, Malaspina discloses all of the claim limitations except, a series of seats or housings (16) (see figure 1, elements 12-14) for the insertion and/or linking of packs of batteries (5) on sale, and means (20, 30) for the charging.

Choi discloses includes a series of seats or housings (16) for the insertion and/or linking of packs of batteries (5) on sale, and means (20, 30) for the charging

As to Claim 1, Malaspina discloses in Figures 1-7, a recharging device of batteries (6), which can also be used as an exhibitor of battery packs or packagings (18) in sales points, comprising at least a supporting element (2) (see figure 2, element 18), which, recharging and/or maintenance of the electric charge, electrically connected to said seats or housings (60, see figure 4) of the recharging device.

Choi discloses includes a series of seats or housings (16) (see figure 1, elements 12-14) for the insertion and/or linking of packs of batteries (5) on sale, and means (20, 30) for the charging

It would have been obvious to a person having ordinary skill in the art at the time of the invention to duplicate charging slots or seats of Malaspina as taught by Choi in order to charge a plurality of batteries with in short intervals and save charging time

As to Claim 11, Malaspina discloses in Figures 1-7, characterized in that said at least one supporting element (1, 17, 51) comprises automatic selection (see figure 14, element 29) and supply means of at least one of said battery packs (5), driven by a control logic (50), when a selection is effected by a user by means (10, 11, 12, 32, 33, 34) situated on the outer casing (35) of the recharging device.

As to Claim 12, Malaspina in view of Choi discloses, characterized in that said at least one supporting element (1, 17, 51) includes a series of columns (13, 14, 16, 20, 26, 37), inside which the battery packagings or packs (5) are arranged, which are introduced into appropriate seats (18) and kept in a horizontal position by means of shelves (15).

As to Claim 13, Malaspina in view of Choi discloses, characterized in that said control and running logic (50) selects at least one battery pack (5) containing the most highly charged batteries (6) of the type selected.

As to Claim 14, Malaspina in view of Choi discloses, characterized in that said automatic selection and supply means comprise at least one pin (91) of an expeller, kept in rest position by at least a first elastic element (92), and at least one coiling, which, after the passage of an electric current, generates an entrainment force of said pin (91) of the compression of said first elastic element (92), which produces the

expulsion of the packaging (5) and the falling of said packaging (5) onto a collection surface (36).

As to Claim 15, Malaspina in view of Choi discloses, characterized in that said at least one supporting element (1, 17, 51) is electrically connected, by means of at least a second elastic element (96), with a body (94), associated with at least a third elastic element (95) and suitable for contacting at least one terminal (80) of the battery pack (5) for the charging of the batteries (6) contained therein.

As to Claim 16, Malaspina in view of Choi discloses, characterized in that said battery packaging or pack (5) is made up of two symmetrical shells (23, 24) which mechanically withhold the batteries (6) and leave the relative terminals free, so that each battery (6) can be charged individually.

As to Claim 17, Malaspina in view of Choi discloses, characterized in that said battery packagings or packs (5) are stacked on top of each other, in correspondence with each column (13, 14, 20, 16, 26, and 37).

As to Claim 18, Malaspina discloses in Figures 1-7, characterized in that said automatic selection and supply means comprise at least one motor (28), whose rotation produces the moving of at least one pushing element (27) which causes the release of each battery packaging or pack (5) from the withholding elastic elements (29, 43).

As to Claim 19, Malaspina discloses in Figures 1-7, characterized in that said automatic selection and expulsion means comprise at least one pushing element (27B), moved by at least one belt (26B), in turn activated by at least one motor (28B).



7. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Wang (US 5, 157, 318).

As to Claim 7, Wang discloses in Figures 1-5, a battery recharging device (6), characterized in that said at least one supporting element (21) comprises, in correspondence with each seat or housing (2, 18), at least one metallic body (23), pushed by at least a first conductor element (28), of the elastic type, which ensures the electric contact with said at least two terminals (7, 8, 80) of the battery pack (5), whereas at least a second conductor element (29) produces the electric contact with said recharging and/or maintenance means of the electric charge.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify charging bay of Inoue and add a battery positioning means as taught by Wang in order to hold batteries in stable position during charging for secure charging process.

As to Claim 8, Inoue in view of Wang discloses , characterized in that at least one of said terminals (7, 8, 80) contacts at least one spring nail (38), in turn electrically connected to said recharging and/or maintenance means (20, 30) of the electric charge.

As to Claim 9, Inoue in view of Wang discloses,, characterized in that said battery packaging or pack (5) is held in position thanks to a notched profile (42) of said at least one supporting element (1, 17, 51), which is engaged with an incision situated on the packaging (5).

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Park et. al. (US 6,683,438) (hereinafter Park).

As to Claim 10, Inoue discloses in Figures 1-18, characterized in that said battery packaging or pack (5) has at least one guiding wing (46) for insertion inside said seats and/or housings (2, 18) and is also equipped with at least one inductor element (44) and/or at least one rectifier diode (45), said at least one supporting element (1, 17, 51) comprising at least one magnetic circuit (47), with polar expansions, on which at least one coiling (48) is wound, so that, upon insertion of the packaging (5) in the respective seat and/or housing (2, 18), said inductor element (44), inserted between said polar expansions of the magnetic circuit (47), forms an inductive magnetic coupling with said coiling (48), so as to transfer the electric energy, supplied by an alternating current generator (49) and rectified by said diode (45), to the batteries (6) of the packaging (5).

Park discloses in Figures 1-2, at least one supporting element (see figure 2) comprising at least one magnetic circuit (47), with polar expansions, on which at least one coiling (350) is wound, so that, upon insertion of the packaging (5) in the respective seat and/or housing (2, 18), said inductor element (350), inserted between said polar expansions of the magnetic circuit (47), forms an inductive magnetic coupling with said coiling (150), so as to transfer the electric energy, supplied by an alternating current generator (VS) and rectified by said diode (D7-D8), to the batteries (battery BAT, see figure 2) (6) of the packaging (5).

It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify charging bay of Inoue and use contactless battery charging circuit as taught by Park in order to avoid bad-contact problem between a battery pack and the battery charger.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SAMUEL BERHANU whose telephone number is (571)272-8430. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm Ullah can be reached on 571-272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Adolf Berhane/  
Adolf Berhane  
Primary Examiner

Art Unit: 2838

Art Unit 2838

/S. B./

Examiner, Art Unit 2838